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| APPLICATION NO.                                                                            | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/723,002                                                                                 | 11/26/2003  | Tianbing Brian Teng  | 7293-056            | 9568             |
| 20575                                                                                      | 7590        | 09/26/2005           | EXAMINER            |                  |
| MARGER JOHNSON & MCCOLLOM, P.C.<br>210 SW MORRISON STREET, SUITE 400<br>PORTLAND, OR 97204 |             |                      | CRUZ, MAGDA         |                  |
|                                                                                            |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                            |             |                      | 2851                |                  |

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/723,002

Applicant(s)

TENG ET AL.

Examiner

Magda Cruz

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 and 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al.

Chen et al. (US Patent Number 6,367,933 B1) discloses:

- Regarding claim 1, a method comprising: selecting a plurality of corners (Figure 9B, elements C0, C1, C2 and C3) within a distorted image projected on a projection surface (column 15, lines 14-16); and predistorting the image responsive to the selecting where the predistorted image exhibits no distortion when projected on the projection surface (column 15, lines 14-18).
- Regarding claims 2, 15 and 27, a method and an apparatus for aligning a center of the image with a center of the projection surface (column 7, lines 10-17).
- Regarding claim 3, a method where the distorting is responsive to the aligning (column 7, lines 58-61).

- Regarding claim 4, a method where the aligning is before the selecting (i.e. keystone distortion that would result from projecting an image; column 7, lines 50-56).
- Regarding claim 5 and 17, a method and apparatus comprising fixing a center of the predistorted image coincident with the center of the projection surface (column 16, lines 32-42).
- Regarding claims 6 and 18, a method and an apparatus where the selecting comprises selecting two corners of the image (column 18, lines 38-40).
- Regarding claims 7 and 19, a method and an apparatus where the selecting comprises selecting four corners of the image (column 18, lines 9-15).
- Regarding claim 8, a method where the selecting comprises using an on screen display means to do the selecting (column 7, lines 61-65).
- Regarding claim 9, a method where the predistorting the image comprises scaling the image (column 13, lines 46-47).
- Regarding claims 10 and 22, a method and an apparatus where the scaling comprises vertically (i.e. Y coordinate) scaling the image (column 13, lines 47-51).
- Regarding claims 11 and 23, a method and an apparatus where the vertically scaling comprises calculating vertical scalar ( $R_x(y)$ ) registers (column 20, lines 47-50).

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- Regarding claims 12 and 24, a method and an apparatus where the scaling comprises horizontally (i.e. X coordinate) scaling the image (column 13, lines 47-51).
- Regarding claims 13 and 25, a method and an apparatus where the horizontally scaling comprises calculating horizontal scalar ( $R_x(Y)$ ) registers (column 13, lines 47-51).
- Regarding claim 14, an apparatus, comprising: means for selecting a plurality of corners within a distorted image projected on a projection surface (column 15, lines 14-16 and column 18, lines 9-15); and means for distorting the image responsive to the plurality of corners (column 7, lines 56-61).
- Regarding claim 16, the means for distorting is responsive to the center of the image (column 8, lines 22-40).
- Regarding claim 20, means for selecting comprises a means for on screen display to interact with a user to select the plurality of corners (column 17, lines 3-9).
- Regarding claim 21, means for distorting the image comprises means for scaling the image (column 13, lines 66 through column 14, line 9).
- Regarding claim 26, an apparatus (Figure 2, element 200), comprising: an interface (Figure 2, element 204) to identify a plurality of corners (i.e. borders of the original image) of a distorted image projected on a surface

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(column 9, lines 39-41); a controller (Figure 2, element 208) to distort the image responsive to the plurality of corners (column 9, lines 51-55).

- Regarding claim 28, the interface (Figure 2, element 204) is a graphical user interface (i.e. store and retrieve images; column 9, lines 18-20).
- Regarding claim 29, the controller (Figure 2, element 208) comprises: a vertical (i.e. Y coordinate) scalar to vertically scale the image and a horizontal (i.e. X coordinate) scalar to horizontally scale the image (column 13, lines 38-56).
- Regarding claim 30, the controller sets scalar registers (i.e. scaling factor; column 19, lines 47-48).
- Regarding claim 31, the vertical and horizontal scalars ( $R_x(y)$  and  $R_x(Y)$ ) operate responsive to the scalar registers (column 19, line 47 through column 20, line 51).
- Regarding claim 32, the plurality of corners is two (column 18, lines 38-40).
- Regarding claim 33, the plurality of corners is four (column 18, lines 9-15).
- Regarding claim 34, the controller (Figure 2, element 208) generates a distorted image before projecting the distorted image on the surface (column 9, lines 50-55).

***Response to Arguments***

3. Applicant's arguments filed 07/13/2005 have been fully considered but they are not persuasive.

4. The applicant has argued, "nothing suggests that Chen et al. predistorts its image responsive to having selected a plurality of corners of the distorted image". However, Chen et al. teaches such predistortion of the image (column 15, lines 14-16) responsive to having selected a plurality of corners (i.e. boundaries of the image) of the distorted image (column 15, lines 20-22).

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-

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2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
William Perkey  
Primary Examiner

Magda Cruz  
Patent Examiner  
September 19, 2005